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PLANNING REPORT ON NATURAL RESOURCES

VIRDEN-WALLACE PLANNING DISTRICT

Technical Report 85-5

Preface

Municipal Councils or established Planning District Boards are charged with the responsibility for municipal land use planning and development. This document has been prepared in response to a request from the local municipal planning authority for background material on the subject of natural resources for which the Department is responsible.

This document describes the natural resources in the study area, and identifies Provincial and Departmental concerns and objectives from a land use, development planning perspective. It offers for review, policies and guidelines to remedy, mitigate or anticipate issues and land use problems.

The bases for this report are the Provincial Land Use Policies dealing with natural resources and the policies of the Department of Natural Resources.

Municipal planning is a consultative process, and the information and policies discussed in this document are offered as advice to the local authority in their land planning deliberations.

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FISHERY RESOURCES

1. PRESENT CONDITIONS/INTRODUCTION

Fisheries resources and potentials are limited within the Virden-Wallace Planning District. Most water bodies are too shallow and most streams are too intermittent to sustain permanent fish populations (Map 1).

Assiniboine River

Only a short section of the Assiniboine River lies within the Planning District. The Assiniboine River supports several fish species including walleye, sauger, perch, pike, freshwater drum, mooneye, goldeye, rock bass, catfish, bullheads, white suckers, silver redhorse suckers, shorthead suckers, quillback suckers, burbot, carp, chestnut lamprey and numerous minnows. Seasonally, most of these species can be expected to occur in the District. Habitat protection is important because populations are sustained by natural reproduction. The extent of the angler harvest has never been monitored intensively.

Fish kills of varying severity have been reported on the Assiniboine River but the causes of the die-off have not always been determined. Water quality is highly variable and is influenced by upstream use, erosion, rate of discharge and algae production along the river. Indirectly, waste disposal, runoff and erosion from adjacent drains and watersheds tend to add fertilizing nutrients to the river which add to algae production. Livestock operations are quite common on lands adjacent to the river and nutrient loading from this source compounds the algae problem. The decomposition of this algae biomass can deplete dissolved oxygen values to levels critical for fish. Algae problems can impact the quality of water supplies and increase water treatment costs of downstream users.

Pipestone Creek

Water flows in Pipestone Creek are influenced greatly by releases from the Moosomin Dam in Saskatchewan. Winter flows are normally very low or non-existent. Water depths within the Planning District are usually insufficient to overwinter fish and the periodic existence of fish, mainly pike and white suckers, often relates to spawning runs upstream from Oak Lake or downstream from Saskatchewan.

Water quality in Pipestone Creek and Oak Lake is dictated mainly by water and land use practices along the watershed. In recent years, fish winterkill on Oak Lake has depleted fish stocks and impacted recreational use of the area. Increased algae and weed growth are likely related to phosphorus and nitrogen loading from erosion and feedlot operations along the watershed.

Other Streams

The downstream end of Gopher Creek has been known to attract pike and white suckers on their spawning run from the Assiniboine River. Bosshill Creek is spring fed and at one location (L.S. 7, Sec. 20-Twp. 10-Rge. 26W) a private dam has been developed for trout rearing purposes.

II. CONCERNS/OBJECTIVES

The Planning District lies within a relatively dry area of the province. Consequently, the fishery potential is limited by a lack of water bodies, the shallow nature of existing water bodies, intermittent flows, highly erodible soils, nutrient loading, drainage and channelization programs. Any factor that adversely influences water quality or quantity can adversely influence fish populations. Since demand is high and fishing opportunities are few, existing fisheries and upstream watersheds should be protected from nutrient loading and contamination.

Fish are a renewable resource and it is incumbent upon all governments to ensure the provision of a suitable habitat that will assure continuing fish stocks for the long term benefit of all Manitobans.

Specifically, the fisheries concerns/objectives are:

1. To ensure the survival or improvement of fish stocks, subject to the effects of natural environmental changes and approved man-made environmental changes. Fish habitat associated with the Assiniboine River and Pipestone Creek should be protected. Similarly, activities and development along other tributaries can influence downstream resources.

2. To maintain, enhance and diversify angling opportunities to Manitobans to meet existing and future demands.

3. To promote communication and cooperation between private landowners, industry, the public, local government and the Department of Natural Resources so as to achieve high standards of conservation practices.

III. POLICIES/GUIDELINES

Although fisheries habitats are being stressed and have been reduced, what remains can be retained and enhanced by judicious use of land and water in the Planning District. In order to achieve the fisheries objectives and to mitigate and alleviate concerns, the following apply:

1. Fisheries habitat, spawning sites and nursery areas should be protected.

   a) Ditching and stream rechannelization should not be permitted in direct tributaries of the watershed capable of supporting spawning and nursery habitat. The construction of dykes as opposed to channel deepening and straightening shall be encouraged. Measures to limit nutrient and sediment inflow shall be encouraged.

   b) Land clearing, cultivation and development to the edge of significant waterways shall be prohibited. Where possible a buffer strip of natural vegetation 91.5 metres (300 feet) wide from the ordinary high water mark shall be maintained along the watershed. Development or maintenance of appropriate vegetative cover along waterways to prevent erosion, siltation and reduce runoff shall be encouraged.

   c) River and stream crossings associated with road development should be constructed with reference to the Department of Natural Resources' stream crossing guidelines to minimize damage to fish and fish habitat.

2. Shorelines subject to intensive use and development should be protected from excessive erosion and organic loading. Activities that discharge pollutants shall be restricted in their location and it may be required that precautionary safeguards that mitigate the pollutant be incorporated into the development activity.

3. The right of public access to fishing waters shall be maintained in accordance with such Acts, Regulations and contracts that are in place from time to time.

4. Sport fish stocking programs in suitable water bodies shall be encouraged to increase angling opportunities.

5. Wherever practical, the maintenance and/or increase of water levels to maintain and improve fish populations shall be encouraged.

IV. IMPLEMENTATION

The objectives and policies with respect to fisheries shall be implemented as follows:

1. By assistance and advice on conservation practices by the staff of the Department of Natural Resources.

2. By public and private cooperation through management and development agreements.

3. By the Board/Council through the judicious use of restrictive zoning by-laws, subdivision control procedures and the issuance of development permits.

FORESTRY RESOURCES

I. PRESENT CONDITIONS/INTRODUCTION

The Virden-Wallace Planning District is within the Aspen Parkland Section, Forest Management Units 06 and 07 as defined in the Manitoba forest inventory classification system, 1980. Forest inventory on the area will be completed in 1985. When completed both Crown land and private land forest inventory information will be available and should be of benefit to landowners in the area. Field forest measurements that may be required on private lands to complete the forest inventory will only be done with permission from the landowners.

As the area is in close proximity to population centres, landowners with forested land on their holdings might consider growing trees as a crop, for example, for fuel wood. This is particularly true for land unsuitable for other agricultural purposes but still capable of supporting tree growth.

While trees and forests have value as a renewable cash crop, their presence is valuable in other ways. These include control of precipitation run-off and retarding snow melt to lessen flood risk; erosion control both water and wind; a habitat for wildlife; and recreation opportunities for people. Furthermore, forest harvesting operations can be done in a manner that will enhance all forest values; however, it is essential that fire be kept out, destructive grazing be avoided, and any utilization or disposal of elm trees be in conformance with The Dutch Elm Disease Act and Regulations.

II. CONCERNS/OBJECTIVES

Principal Objective:

To effectively manage and protect forested lands, and to maintain and enhance the overall benefits accruing from the forest resource.

Specific Objectives:

1. To sustain the integrity of the forest land base in Manitoba and to maintain the forest resource in a healthy and productive state.

2. To encourage responsible use and husbandry of the forest resource, to obtain maximum achievable net benefits including employment and recreation opportunities, sound land use practices and soil conservation.

3. To assist in the creation and sustenance of self-supporting industries by providing appropriate tenure and access to a forest resource managed under sustained yield practices.

III. POLICIES/GUIDELINES

The general policy applying to forests on Crown land will be to improve sustained yield and intensive management practices beginning with the more productive and accessible forest sites in the Province as economic conditions and funding support permits.

The general policy applying to forests on private land will be to encourage efficient and effective utilization of these timber resources as cash crops, and as a soil conservation land use technique for controlling erosion, etc.

IV. IMPLEMENTATION

The objectives and policies as outlined shall be addressed and implemented as follows:

1. By the Board and/or Councils through the judicious use of restrictive zoning by-laws, subdivision control procedures and the issuance of development permits which recognize the intent of the concerns and objectives identified.

2. By encouraging good forest management practices on all forested land.

3. By maintaining the integrity of the forest land base.

4. By assistance and advice on conservation practices by staff of the Department of Natural Resources and by public and private co-operation through management and development agreements.

OUTDOOR RECREATION

I. PRESENT CONDITIONS/INTRODUCTION

The Virden-Wallace Planning District does not have any specific areas which have a high capability for outdoor recreation, according to the Canada Land Inventory for outdoor Recreation. However, the Assiniboine River valley along the eastern boundary, and a small area along Pipestone Creek do have a slightly higher capability (Map 1). As well, the northern and western portions of the Planning District have a higher capability (Class 5) based upon wildlife-related recreation opportunities and the associated interesting landscape and patterns of land use. Most recreation opportunities are extensive in nature and land-oriented; e.g., hunting, travelling and viewing.

Three Wayside Parks are located in the Planning District, as follows:

1) Hargrave Wayside This site operates as a Highway Rest Stop. Minor upgrading in the form of landscaping and provision of disabled accessible facilities will be undertaken as budgets permit.

2) Kirkella Wayside The site was closed during the 1984 season. Parks Branch will proceed to delete the site from the parks system as the wayside is in close proximity to the Kirkella Information Plaza.

3) Kirkella Information Plaza This site functions as a major entry point to the Province. Upgrading in the form of modernizing facilities and improving informational and promotional displays has been identified for the short term. The long-term proposal involves development of a new wayside, perhaps in association with the Province of Saskatchewan, in the vicinity of the border crossing. The wayside will function as a primary entry node for rest-stop and informational purposes.

II. CONCERNS/OBJECTIVES

The development plan for the Virden-Wallace Planning District should recognize the available potential for outdoor recreation, maintain and enhance environmental quality, and prevent conflict with outdoor recreation resource use. In this respect the physical or natural resources of the District dominate. The identification, maintenance, and protection of the basic resource is most important. All land uses within or adjacent to the better recreation opportunities (Class 4 and 5) lands should be sensitive to and supportive of outdoor recreation.

Objectives:

1. While existing areas of outdoor recreation use have adequate protection from adjacent uses, all important recreation areas, including the Provincial Wayside Parks, should be afforded protection from adjacent uses which would diminish or endanger the outdoor recreation resource opportunities.

2. The outdoor recreation opportunities based upon wildlife (nature interpretation, hunting) should be identified and safeguarded. In this regard wetland areas are of particular importance and should be protected.

3. Development and use of recreation areas should be allowed only to the carrying capacity of the resource.

4. Recreation areas should be protected from uses, which would diminish or reduce the resource.

5. The Development Plan shall ensure that residents will continue to have as wide a choice of outdoor recreation opportunities as possible.

6. The right of public access to outdoor recreation opportunities shall be ensured.

7. Major road access corridors such as the Trans-Canada Highway should be identified and afforded protection in order to maintain a high quality environment and the integrity of recreation opportunities.

III. POLICIES/GUIDELINES

1. Land uses which would conflict with or degrade the recreation opportunities, or quality of the environment of the Provincial Wayside Parks shall not be allowed.

a. A buffer zone of 300 metres is recommended to protect wayside parks. Within the buffer zone, uses which do not conform to recreation interests would be controlled or prohibited.

2. All lands having Class 4 or 5 outdoor recreation capability are of local significance and should be recognized as providing certain extensive types of recreation opportunities (e.g., nature interpretation, hunting, travelling and viewing). Outdoor recreation, while not a priority use, should be considered as a compatible secondary use. In this regard, wetland areas should not be altered or drained. The conservation of wetlands should be encouraged.

3a. Existing public rights of access to outdoor recreation opportunities shall be maintained or improved.

b. The designation of development policies respecting lands adjacent to and along access roads to existing or future parks and recreation areas shall not endanger or degrade the recreation experience. In this respect the Trans-Canada Highway should be recognized as a recreation corridor.

4. The Planning District shall encourage the development and growth of outdoor recreation enterprises and service functions which are compatible with the character of the community.

5. Scattered or random residential development would generally be in conflict with outdoor recreation priorities.

6. Land or soil management practices which would degrade outdoor recreation interests should not be allowed.

IV. IMPLEMENTATION

The policy objectives can be achieved by means of zoning by-laws. Consultation with the Department of Natural Resources is encouraged.

WATER RESOURCES: GROUNDWATER

I. PRESENT CONDITIONS/INTRODUCTION

Groundwater is available in most of the District. However, groundwater quantity and quality varies over a wide range. In general, aquifer yield is adequate for domestic and moderate farm requirements and, at a few locations, conditions are favourable for fairly high capacity wells. Groundwater quality ranges from good to salty. The total groundwater supply is adequate for present requirements and minimal new development.

The distribution of groundwater resources is not uniform; in some parts of the District it is fairly readily available and in others even a minimal supply is difficult to find. The most common aquifers in the District are lenses and pockets of sand and gravel within the surficial deposits. The yield of most of these aquifers is in the 0.1 L/s (litre per second) to 1.0 L/s (1-13 I.G.P.M.) range and quality ranges from good to very poor. A few fairly high capacity aquifers suitable for municipal and moderate commercial requirements occur at Elkhorn and in the surrounding area. The potential yield of wells in some of these aquifers could be around 25 L/s (325 I.G.P.M.).

In a small area in the north central part of the District (Map 2) the shale bedrock is only a few metres (yards) below ground level and it forms the most common aquifer. In this area water quality in the shale aquifer ranges from good to salty. In the rest of the District the shale bedrock generally is more than 30m (100 ft.) below ground level and usually yields only salty water.

Because abandoned wells and test holes penetrating the shale can transmit the salty water to fresh water aquifers, all abandoned wells and test holes penetrating the salt water zone should be adequately sealed to prevent groundwater movement from the salt water zone into fresh water aquifers. In numerous small areas and in a few fairly extensive areas shallow aquifers that could be polluted by infiltration of pollutants from the surface may exist. Consequently these areas are classified as groundwater pollution hazard areas (Map 3).

II. CONCERNS/OBJECTIVES

The groundwater supply in the District is, in general, adequate for present requirements and in a few areas for some new development. Potable groundwater quality in the District ranges from very poor to good. Salty water is common in the shale bedrock that underlies the District. Hence the overall concern is groundwater resource management and protection to assure adequate supplies for existing users and for potential development. In numerous small areas and in a few fairly extensive areas shallow aquifers that are subject to pollution may exist.

Objectives:

1. To manage the aquifers in a manner that would not deprive existing users of their water supplies and would not be detrimental to the groundwater potential in the District.

2. To maintain groundwater withdrawal within acceptable limits.

3. To prevent aquifer pollution.

III. POLICIES/GUIDELINES

1. Intensive development (e.g., subdivisions) and high capacity wells should be permitted only in areas where they will not cause a reduction in water supply for existing users.

2. Groundwater consumption should not exceed the total sustained yield of an aquifer.

3. Wells should be installed in a manner that would not have a detrimental effect on aquifers.

4. Activities that may cause pollution under normal operating conditions or by accident should not be permitted in groundwater pollution hazard areas unless it can be proven by adequate field investigation that the proposed activities will not cause pollution of existing or potential groundwater supplies in the area.

5. Abandoned wells and test holes must be adequately sealed to prevent salt water intrusion into fresh water aquifers.

IV. IMPLEMENTATION

1. Aquifer management is implemented by the Water Resources Branch of the Manitoba Department of Natural Resources under the provisions of the Groundwater and Water Well Act and the Water Rights Act.

2. Well construction in respect to prevention of detrimental effect on aquifers is regulated by the Water Resources Branch of the Manitoba Department of Natural Resources under the provisions of the regulations made under the Groundwater and Water Well Act.

3. Aquifer pollution prevention is implemented by the Environmental Management Division of the Department of Environment and Workplace Safety and Health.

WATER RESOURCES: SURFACE WATER

I. PRESENT CONDITIONS/INTRODUCTION

The Virden-Wallace Planning District is situated in the Assiniboine River drainage basin. Most of the land within the District drains to the Assiniboine via Bosshill, Gopher and several lesser creeks. A small area in the south-west corner of the District drains into Oak Lake. The areas between creeks are frequently interspersed with potholes (Map 4).

Drainage concerns have been reported in various areas of the District, but are localized problems, affecting agricultural lands. Low lying areas adjacent to creeks in and around Virden may flood, but little development of flood prone lands has occurred to date. Virden will be mapped under the Canada-Manitoba Flood Damage Reduction Program, at which time the limits of areas unacceptable for development will be defined.

II. CONCERNS/OBJECTIVES

There are no extensive areas of hazard land in the Planning District. In most cases hazards can be avoided by careful selection and grading of building sites. However, there is a concern that, if development or unsuitable agricultural practices occur on hazard lands, it may lead to acceleration of environmental damage, interference with natural processes, public expenditures for remedial works or assistance, waste of resources and personal loss and hardship. Therefore, the following objectives are established.

1. To minimize personal hardship and inconvenience, adverse affects on public health and loss of life;

2. To minimize property damage and public expenditures for relief or protection in areas subject to flooding, water erosion, wind erosion, bank instability landslide or subsidence;

3. To restrict activities which would accelerate or promote damages arising from causes such as erosion or bank instability;

4. To acquire access to all waterways in order to carry out public work projects when required;

5. To maintain the natural capacity of the streams to convey flood flows;

6. To encourage the preservation of natural vegetation along the banks of waterways.

III. POLICIES/GUIDELINES

1. Development in areas which, in the opinion of the Board or Council, may be subject to physical hazards shall generally be limited to agricultural uses or open space uses. Under special economic or social circumstances the Board or Council may permit more intensive development if the hazard is eliminated or protected against. Development in hazardous areas shall be subject to the following requirements:

a) If the land is subject to flooding, all permanent structures must be located on land which has been raised by fill to an elevation at least 0.6 metres above the 100 year flood level.

b) Land which may be eroded away within a period of 50 years must be excluded from development unless it is demonstrated, to the satisfaction of the Board or Council, that the erosion process has been halted.

c) Development shall not be permitted on lands subject to bank instability, landslides or subsidence.

d) All structures and services shall be protected against damage and shall be functional under hazard conditions.

2. Notwithstanding (1) development will not be permitted if, as a result of the development;

a) There is an added risk to life or safety, or

b) Water flow, flow velocities or stages are adversely altered, obstructed or increased.

3. Activities such as dumping, excavation, clearing, cultivation, or excessive grazing which would accelerate or promote dangerous erosion or bank instability will be prohibited.

4. In areas where the specific hazard has not been defined, permanent structures shall be set back from all waterways a distance of at least 10 times the height of the bank above channel grade or 60 meters whichever is greater unless an engineering investigation shows that these limits may be reduced.

IV. IMPLEMENTATION

The Policies shall be implemented by means of, variously, zoning by-laws, conditions of subdivision approval, the issuance of development permits and building permits, development agreements and such programs as are determined from time to time by the Board or Councils to be necessary and not in conflict with the provisions of any part of the Plan.

WILDLIFE RESOURCES

1. PRESENT CONDITIONS/INTRODUCTION

The Virden-Wallace Planning District falls within the watershed of the Assiniboine River system which includes the glacial Lake Souris Basin. Drainage from the uplands is by small streams contributing to the Assiniboine River Valley, which passes through the extreme northeast part of the R.M. of Wallace. Relief throughout the District varies from flat to gently rolling. Along the Assiniboine River Valley escarpment in the eastern part of the District, small streams and ravines are common.

The majority of the District falls in the Oxbow Till Plain which abuts the Lake Souris Basin. Surface deposits in the area are chiefly of glacial origin which have formed loam to clay loam soils, with varying degrees of stoniness. Some lacustrine deposits from glacial Lake Souris occur in the Virden area with an outwash plain of sandy gravelly soils occurring adjacent to the Assiniboine River Valley. Soils in the latter area tend to be droughty and of less agricultural value than on the Oxbow Till Plan.

The majority of the District is under cultivation or in relatively open pasture, periodically dotted with morainic depressions serving as potholes or small sloughs. Wildlife habitat is scattered over what is largely private land. It is generally in the form of small bluffs and potholes on what are generally good agricultural soils. In the eastern part of the District, there is much more tree cover and shrub pasture in the Wallace Community Pasture, which occurs on the poorer, droughty soils adjacent to the Assiniboine Valley.

White-tailed Deer

Canada Land Inventory ungulate capability classes for the 12 townships in the Planning District vary considerably. Most of the major creek valleys and tributary ravines are rated Classes 2, 3 or 3W. The area northwards from Virden to Hainsworth, Two Creeks and westward to the Elkhorn area is rated as Class 4. The majority of the District is designated Class 3 for deer.

Although relatively little of the District is highly rated, the actual value of the extensive area of Class 4 land is undoubtedly much higher. This is because these areas retain a large amount of treed and shrub habitat compared to general clearing which has occurred on the Class 3 areas on the better agricultural soils of the Oxbow Till Plain.

Summer deer range is thought to be adequate but winter range is confined to the larger blocks of bush (i.e., the Community Pasture) and the uncleared slopes of the Assiniboine River Valley to the east. Deer movement studies have demonstrated that deer on summer range close to the Saskatchewan border will habitually return to the Assiniboine Valley in winter[1] for the cover provided by the uncleared slopes. The District is 432 square miles in area. There are 14 sq. miles (3.1%) of Crown land, of which 4.5 are under agricultural

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[1] Shoesmith, M. W. and L. J. Bidlake. 1978. The movements of white-tailed deer in southwestern Manitoba and the implications toward management. M.S. No. 78-18. 27pp.

lease and 8.3 are within the PFRA Wallace Community Pasture. It is on this 3.1 percent of the District that a great deal of the winter range for deer occurs, a disproportionately large amount compared to the amount on private land in the remainder of the municipality.

A study of habitat loss over a nine-year period in part of the R.M.s of Wallace and Pipestone showed that over 15,000 acres of wildlife habitat disappeared from municipal, Crown and private land[2]. The same study indicated that Crown land constituted 12.6 percent of the available winter range for deer and supported an estimated 28.2 percent of the deer herd within the study area.

Of all the deer range in Manitoba, the southwestern part of the province produces more deer per unit area and sustains higher hunting pressure than elsewhere[3]. The dependency of deer on habitat occurring on private land is exemplified in this District and adjacent areas. With continued loss of habitat on private land to urban and agricultural interests, the deer population is bound to decline. The influence of the District in retaining as much habitat as possible will help to ensure healthy stocks of Manitoba's most abundant big game animal for the future.

Waterfowl and Wetlands

The Canada Land Inventory rates the majority of the District as being highly productive for waterfowl production. Approximately 75 percent of the District is rated as Class 2 or 3 for waterfowl. There is no question that this area is important for duck production since it contains many thousand potholes and sloughs on the till plain, often associated with small bluffs of aspen. With average weather conditions, these small wetlands contain water and are excellent breeding and brood rearing habitat. Unfortunately, the extended drought of the 1980s has decreased water levels so that many of these potholes are currently dry.

Continued inroads on this valuable waterfowl habitat are being made by draining, burning, ditching, etc. Milliken in his study of habitat loss in the municipalities of Pipestone and Wallace, noted that 3,320 wetlands were destroyed and lost between 1971 and 1979, an average of 8.2 wetlands per square mile. No attempt was made to calculate the total acreage of wetlands permanently lost, but within each of these municipalities, it is thought to be substantial.

Casual observations over the last few years indicate that clearing of treed and shrub land and drainage of wetlands is still continuing, and, in fact, may have accelerated over what occurred previously, not only in this District but elsewhere in southwestern Manitoba.

Furbearers

Furbearers are found throughout the District. Aquatic furbearer species such as beaver and muskrat are found in association with the many wetlands or stream channels with a constant water source. Coyotes and red fox currently appear to be on the increase, probably due to decreased trapping pressure over the last few years and a drop in the price of pelts of these species. Raccoons, weasel, badger and mink are likely to be found anywhere there is suitable habitat, particularly in the treed parts of the District.

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[2] Milliken, I. J. 1980. If deer are to survive...a habitat loss study in southwestern Manitoba, 1971-1979. M.S. Rept. No. 80-33. Man. Dept. Nat. Res. 23pp.

[3] Ibid.

Non-Game Species

Currently, there is no species of non-game wildlife in the District that warrants protection or consideration, particularly with regard to habitat protection. A wide variety of animals and habitats in the non-game category occur in this area but their overall or individual status is unknown. As encroachment and destruction of treed and pasture areas continues, as well as the permanent loss of potholes and sloughs, the net result of this habitat loss will be a decline in the species of wildlife, both game and non-game.

Order-in-Council Wildlife Lands

At the present time, there are no Wildlife Refuges or Public Shooting Grounds anywhere within the Planning District. There is one quarter section of Wildlife Management Area; the Two Creeks Unit of the Upper Assiniboine WMA, located on SE 22-12-27.

Wildlife Projects

Ducks Unlimited have six projects within the District, these being located as follows:

Virden	NW 36-09-26, SW 1-10-26
Johnny Clark	E½ 20-10-26
Torry	All 13-11-26, S½ 24-11-26
Best	N½ 14-12-27
Vanderheide	S½ 8-10-28
Morton	N½ 27-12-27, NW 26-12-27

There are no other known wildlife projects owned or sponsored by the Department of Natural Resources, Ducks Unlimited, or other private concerns within the District.

II. CONCERNS/OBJECTIVES

Flooding and damage caused by beaver is not excessive in the District but does occur along municipal roads and provincial highways. The frequency of problems is largely dependent on annual availability of water. As problems arise, they are generally dealt with by regional Natural Resource officers, Highways Department, or municipal staff.

Deer damage to forage or cereal crops is not significant in the District. Regional staff find that most problems occur during winter months. Staff use a variety of techniques, particularly the use of bloodmeal and "short stop" feeders, to prevent or alleviate damage if the affected farmer does not wish to claim compensation for his losses.

The major concern in this District is the continuing loss of wildlife habitat.

The most notable use of wildlife is by recreational hunters, who frequent the area for deer, upland game birds and to some extent waterfowl. Out-of-hunting season use of wildlife by the public is not exceptional.

Objectives:

1. To maintain wildlife populations at existing levels, particularly on poorer quality land.

2. To promote programs and legislation to monitor wildlife habitat on private land, unused road allowances and other Crown land.

3. To promote conservation and cooperation between people and agencies, i.e., the District Board, Municipal Council, government departments, Ducks Unlimited (Canada), to found an active program of conservation of habitat and wildlife resources within the District.

III. POLICIES/GUIDELINES

The following policies should be applied in order to promote the maintenance, production and use of wildlife resources within the District.

1. The Board should discourage, if at all possible, the clearing of bush on all lands with an agricultural capability of Classes 4, 5 or 6.

2. Rural subdivisions and industrial developments should be encouraged only on cleared land in close proximity to existing service roads and towns. Developments of any nature should be discouraged from areas of known wildlife value and areas of good wildlife habitat.

3. Conservation of wetlands should be encouraged. In this respect wetlands areas should not be drained.

4. Areas prone to waterfowl or deer depredation should be recognized and landowners encouraged to seek assistance or advice from the Department of Natural Resources staff.

IV. IMPLEMENTATION

The objectives and policies of the District with respect to land use and wildlife resources should be implemented as follows:

1. By assistance and advice on conservation practices by staff of the Department of Natural Resources.

2. By public and private co-operation through management and development agreements.

3. By the adoption of judicious zoning by-laws. Through the control of sub-divisions and the issuance of development permits where applicable.

4. By the adoption of municipal by-laws prohibiting the clearing/breaking of unused road allowances.

CROWN LANDS

INTRODUCTION

This section describes the Crown lands in the Virden-Wallace Planning District, providing an inventory of Crown lands and present commitments. Additionally, this section will discuss the authority for Crown lands, the legal aspects thereof and the planning and administration of Crown land.

DEFINITION

Crown land, for the purposes of this section, is defined as all land under Order-in-Council designated as; Provincial Park, Provincial Forest, Ecological Reserve, Wildlife Management Area, and Community Pasture, plus all other land administered by the Department of Natural Resources and Department of Agriculture under 'The Crown Lands Act'. In addition, all water bodies, streams, rivers, and creeks are considered Crown lands except where original title has confirmed the lake bed or stream bed to an individual.

ACTS AFFECTING CROWN LANDS

There is a variety of acts which affect the administration and management of Crown lands. For the purposes here, the principal acts which govern use and management of these lands are:

1. The Crown Lands Act,
2. The Fisheries Act,
3. The Forest Act,
4. The Provincial Park Lands Act,
5. The Water Power Act,
6. The Rivers and Streams Act,
7. The Wildlife Act, and
8. The Water Resources Administration Act.

MANAGEMENT AND ADMINISTRATION OF CROWN LAND

The actual management and administration of Crown land is shared between the Departments of Natural Resources and Agriculture.
The Agricultural Crown Lands Branch issues agricultural leases and permits for those Crown lands which are designated by the Minister of Natural Resources as:

1. primarily agricultural lands, and

2. designated as multiple use lands which may only be used for agricultural purposes on an interim or secondary use basis, subject to specific conditions and covenants required by other resource users.

The principal responsibility for Crown land remains with the Department of Natural Resources, which administers The Crown Lands Act excepting those specific sections under the responsibility of the Minister of Agriculture.

The Minister of Natural Resources is responsible for administration, direction and control of the surveys of Crown lands. Survey monuments defining Township, Section and Quarter Section corners have been established throughout the Planning District.

The protection of the township survey fabric, the primary function of which is to support the transferring of rights in land via The Real Property Act or The Crown Lands Act, is essential to efficient and effective land administration. No system, purporting to give evidence of the ownership of land is complete if one cannot determine what land is being conveyed or where its boundaries are located. Boundaries, once defined, are a matter of law and the survey monument is the vital link between the ground and the administrative record.

CROWN LAND CLASSIFICATION AND PLANNING

Crown land is exempt from The Planning Act and is under the jurisdiction of the Manitoba Government as governed by the various acts of the Legislature mentioned above.

The classifying to use of Crown land in the southern portion of the Province is the responsibility of the Crown Land Classification Committee, (CLCC). This is an Interdepartmental Committee with representation from the Departments of Agriculture, Natural Resources and Municipal Affairs. The Committee reports to and receives their direction from the Provincial Land Use Committee of Cabinet.

In carrying out its planning responsibility, the Crown Land Classification Committee has established a planning process which involves Local Councils and/or Planning District Boards. In this regard draft Crown land plans are prepared and forwarded to local planning authorities for review, comment and discussion. Upon agreement of these plans by local authorities, they are presented to the Provincial Land Use Committee for approval.

INVENTORY

In the Planning District there are approximately 3,613 hectares of Crown land (Map 5, Table 1), representing approximately 3.1 percent of the land base in the Municipality.

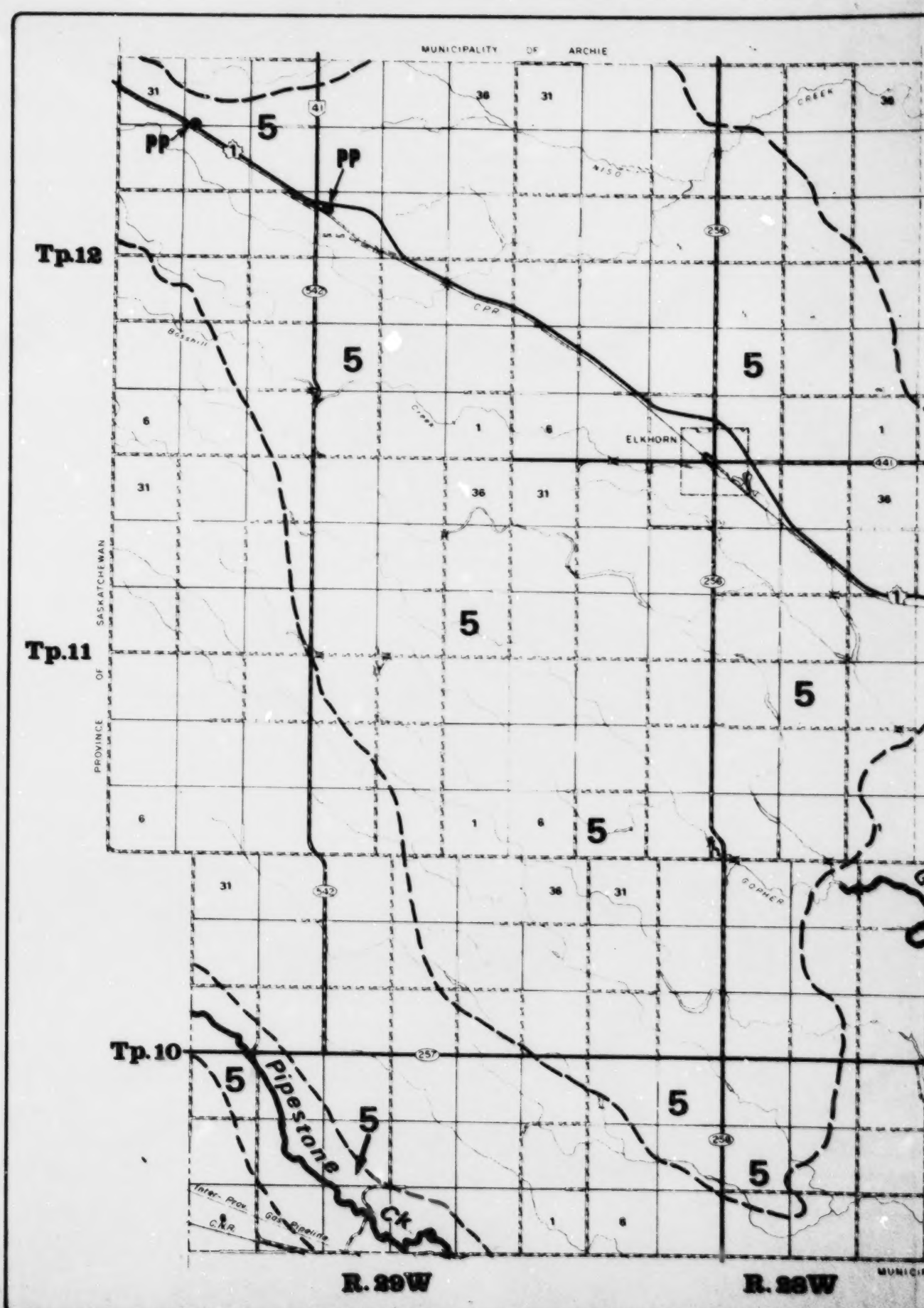
PRESENT COMMITMENTS

In the Planning District the major commitments of Crown land are to Community Pasture via Order-in-Council and to agricultural use via leases.

However, it must be noted that the commitment of Crown land is a dynamic process with leases and permits being issued, expiring, being renewed, cancelled and dropped. This occurrence is a day-to-day administrative process being actioned by various Departments of Government.

Table 1. Provincial Crown Land and Crown Land Commitments in the Virden-Wallace Planning District (October, 1984).

Commitment	Number	Area hectares (acres)	
1. Orders-in-Council			
Community Pasture	1	2,140	(5,289)
Wildlife Management Area	1	65	(160)
Provincial Park	3	5	(11)
2. Agricultural			
Cash Rental Agricultural Lease	5	298	(737)
Forage Lease	14	841	(2,079)
3. Other			
Miscellaneous Lease	3		
General Permit	15		
Total Provincial Crown Land		3,613	(8,927)


MUNICIPALITY OF ARCHIE
PP
PP
Tp.12
Tp.11
Tp.10
SASKATCHEWAN
PROVINCE OF
ELKHORN
CPR
Pipestone
Ck
Inter. Prov.
C.N.R.
Gas Pipeline
R. 29W
R. 28W
5
6
1
31
36

VIRDEN ~ WALLACE
PLANNING DISTRICT

Map 1. Fish Habitat, C.L.I.* Recreation Capability

Fish Habitat

C.L.I.* Recreation Capability (Class 4 & 5 only)

PP Provincial Wayside Park

*Canada Land Inventory

1 0 1 2 3 4 5 Miles

1 0 1 2 3 4 5 6 7 kilometers

MUNICIPALITY OF ARCHIE

MUNICIPALITY OF MINIOTA

MUNICIPALITY OF PIPESTONE

R. 28W

R. 27W

R. 26W

ELKHORN

VIRDEN

Gopher Ck.

Bosshill Ck.

Assiniboine R.

CPR

NISCO

Tp.12

Tp.11

Tp.10

R. 29W

R. 28W

R. 27W

R. 26W

ELKHORN

VIRDEN

AQUIFERS

SURFACE SAND A
IS COMMON IN THI
FROM PLACE TO P
1.0 L/S (1–13 I.G.
MINOR SURFACE SA
PARTICULARLY ALO

LENSES OF SAND
AND GRAVEL IN TH
A HECTARE (2 ACR
RANGES FROM 5m
GENERALLY IS LES
OF THE AQUIFERS

FRACTURED SHAL
WHICH ARE WATER
5m TO 20m (16–
A FEW LOCATIONS
SHALE AQUIFERS
OFTEN ARE AT CO

BURIED BEDROCK
VALLEY MAY BE M
THICK SAND AND

SCALE IN MIL
SCALE IN KILOM

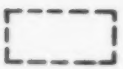
PROVINCE OF M
DEPARTMENT OF NAT
WATER RESOUR

M. RUTULIS

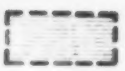
LEGEND

AQUIFERS

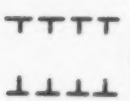
SURFACE SAND AND GRAVEL: SHALLOW WATER BEARING SAND AND GRAVEL IS COMMON IN THIS AREA. THE POTENTIAL YIELD OF THE AQUIFER VARIES CONSIDERABLY FROM PLACE TO PLACE AND RANGES FROM 0.1 L/S (LITRES PER SECOND) TO MORE THAN 1.0 L/S (1–13 I.G.P.M.). WATER QUALITY RANGES FROM FAIR TO EXCELLENT. SCATTERED MINOR SURFACE SAND AND GRAVEL AQUIFERS MAY ALSO OCCUR IN THE REST OF THE AREA, PARTICULARLY ALONG THE CREEKS IN THE WESTERN PART OF THE DISTRICT



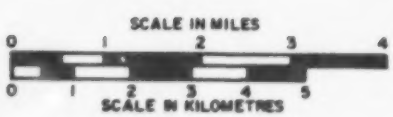
LENSES OF SAND AND GRAVEL: THE AQUIFERS ARE FORMED BY ISOLATED DEPOSITS OF SAND AND GRAVEL IN THE OVERBURDEN. THE AREA OF THE AQUIFERS RANGES FROM LESS THAN A HECTARE (2 ACRES) TO SEVERAL SQUARE KILOMETRES (MILES), DEPTH TO THE AQUIFERS RANGES FROM 5m (METRES) TO MORE THAN 50m (15–165 FEET). THE YIELD OF WELLS GENERALLY IS LESS THAN 1.0 L/S (13 I.G.P.M.). HOWEVER, THE POTENTIAL YIELD OF SOME OF THE AQUIFERS MAY BE UP TO 25 L/S (325 I.G.P.M)



FRACTURED SHALE: THE SHALE BEDROCK IN THIS AREA HAS FRACTURED ZONES WHICH ARE WATER BEARING. THE DEPTH TO THE SHALE AQUIFERS RANGES FROM 5m TO 20m (16–65 FEET). WATER QUALITY RANGES FROM GOOD TO POOR. AT A FEW LOCATIONS IT IS SALTY. WELL YIELD GENERALLY IS LESS THAN 0.5 L/S (6 I.G.P.M) SHALE AQUIFERS EXIST IN THE REST OF THE DISTRICT BUT THE SHALE AQUIFERS THERE OFTEN ARE AT CONSIDERABLE DEPTH AND THE WATER IS SALTY.



BURIED BEDROCK VALLEY (APPROXIMATE LOCATION): DEPTH TO THE SHALE IN THE BURIED VALLEY MAY BE MORE THAN 130m (425 FEET) AT SOME LOCATIONS. FAIRLY EXTENSIVE AND THICK SAND AND GRAVEL AQUIFERS MAY OCCUR IN THE BURIED VALLEY.

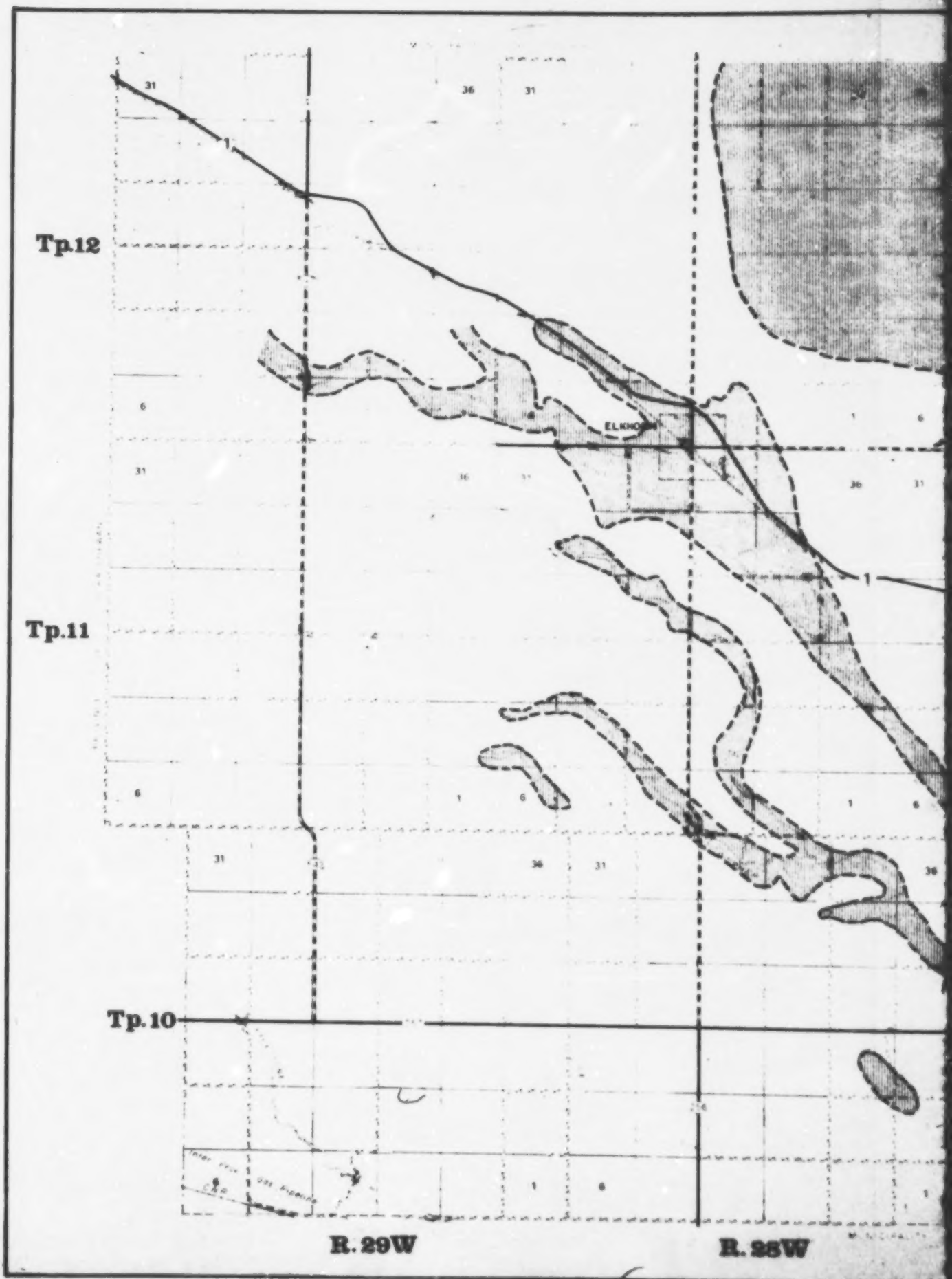


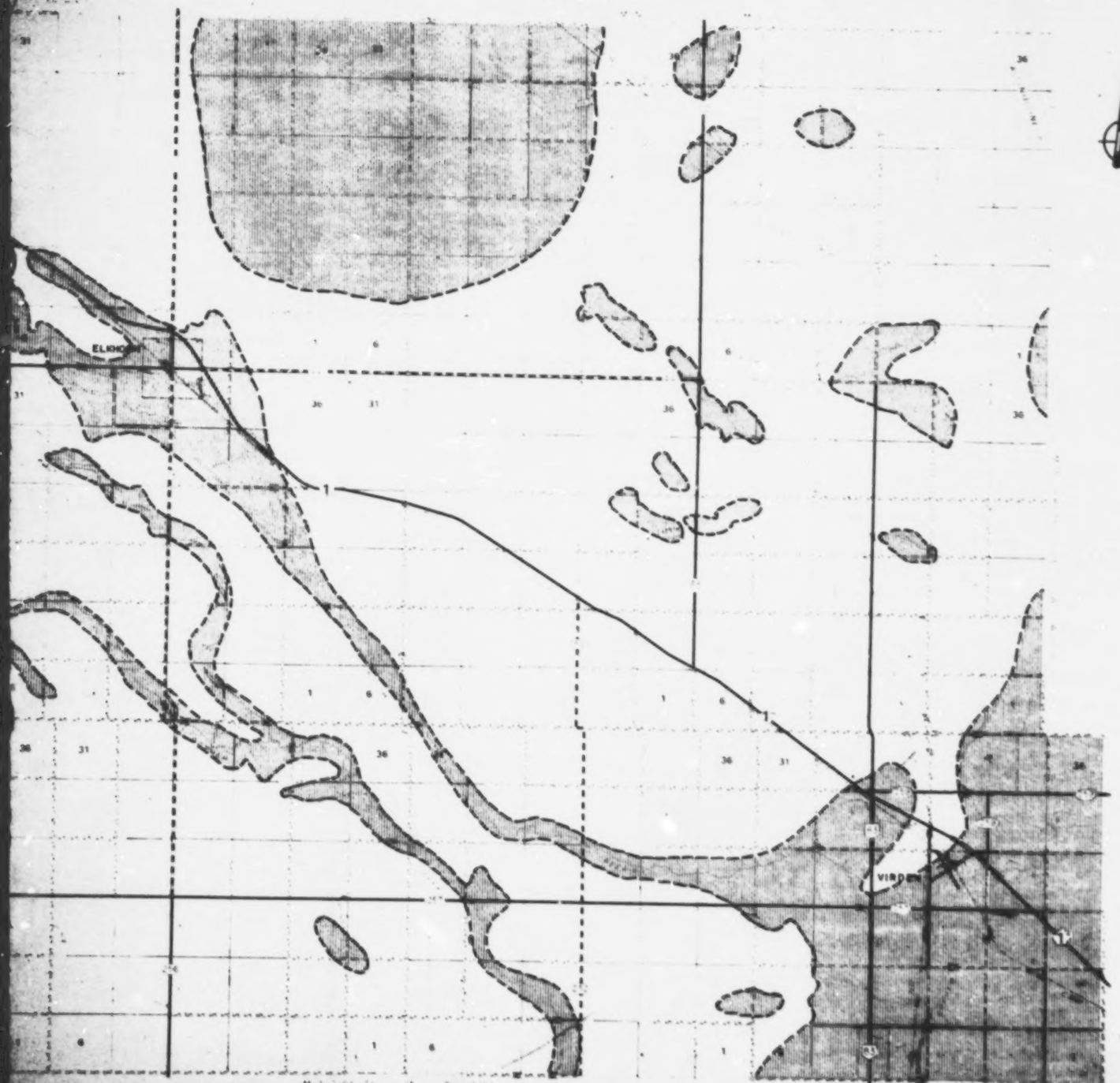
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

VIRDEN-WALLACE PLANNING DISTRICT

MAP 2. AQUIFERS

PREPARED	DRAWN	SUBMITTED	APPROVED	SCALE	DATE	SHEET	FILE NO.
M.RUTULIS	S.S			AS SHOWN	84 11 27	1 OF 2	90-1-7-1120
	CHECKED						


Tp.12
Tp.11
Tp.10
ELKHO
R. 29W
R. 28W



LEGEND

GROUNDWATER POLLUTION HAZARD AREA

NOTE:
DETAILED FIELD INVESTIGATIONS MAY SHOW THAT GROUNDWATER POLLUTION HAZARD DOES NOT EXIST IN SOME OF THE INDICATED AREAS.

REFERENCES:

(1) RIDING MOUNTAIN AREA
GROUNDWATER POLLUTION HAZARD MAP
D. SIE, 1978

(2) VIRDEN AREA
GROUNDWATER POLLUTION HAZARD MAP.
M. RUTULIS, 1983

SCALE IN MILES
SCALE IN KILOMETRES

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

VIRDEN-WALLACE PLANNING DISTRICT

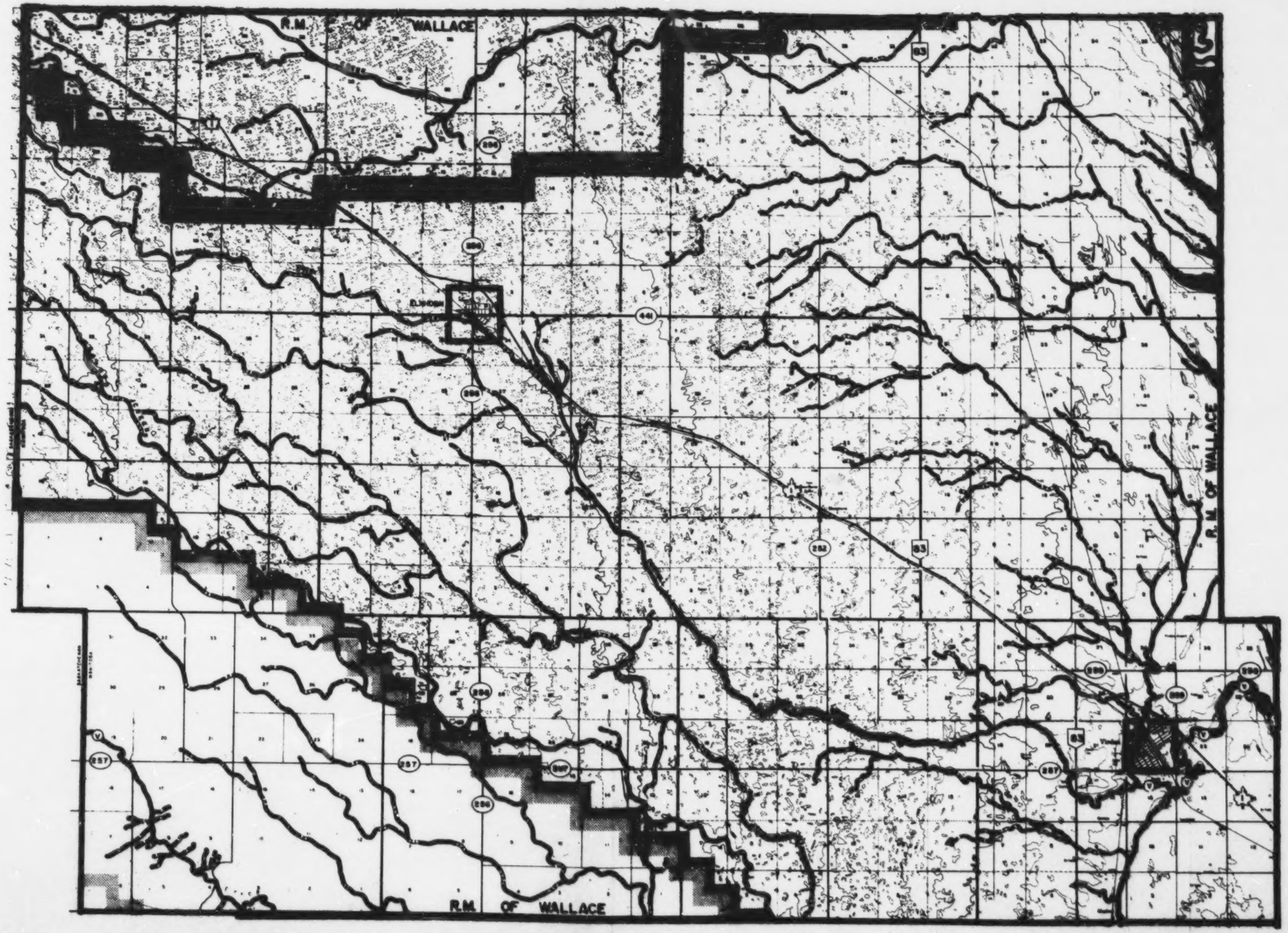
MAP 3. GROUNDWATER POLLUTION HAZARD AREAS

DRAWN M. RUTULIS
DATE 84 11 23
FILE NO. 90-1-7-120

TWP. 12

TWP. 11

TWP. 10



RGE. 29 W.

RGE. 28 W.

RGE. 27 W.

RGE. 26 W.

VIRDEN PLANN

Map 4.
Surface

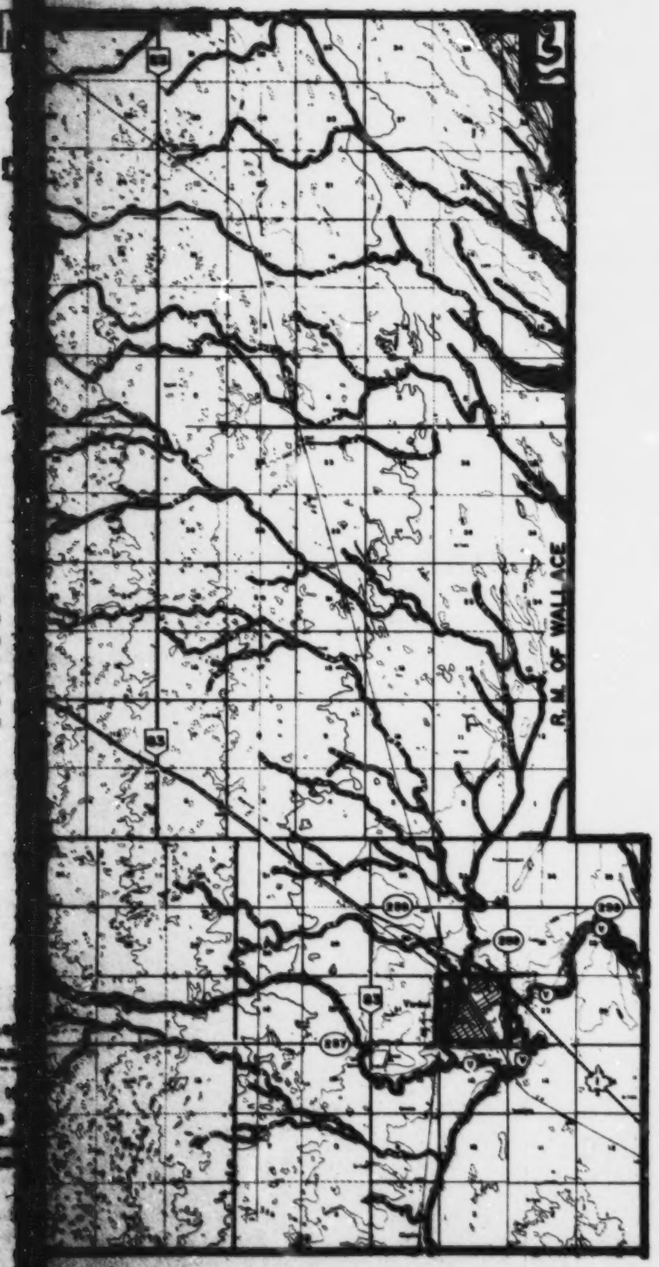
LEGEND

WATER COURSE
1st ORDER STREAM
2nd ORDER STREAM
3rd ORDER STREAM
4th ORDER STREAM
5th ORDER STREAM
6th ORDER STREAM
7th ORDER STREAM

LIMITS OF DRAINAGE
CITY, TOWN AND
BOUNDARIES
PROVINCIAL TRUNK
PROVINCIAL ROADS
TRANS CANADA HIG
INDIAN RESERVE BO

VIRDEN ~ WALLACE
PLANNING DISTRICT

Map 4.
Surface Drainage Systems

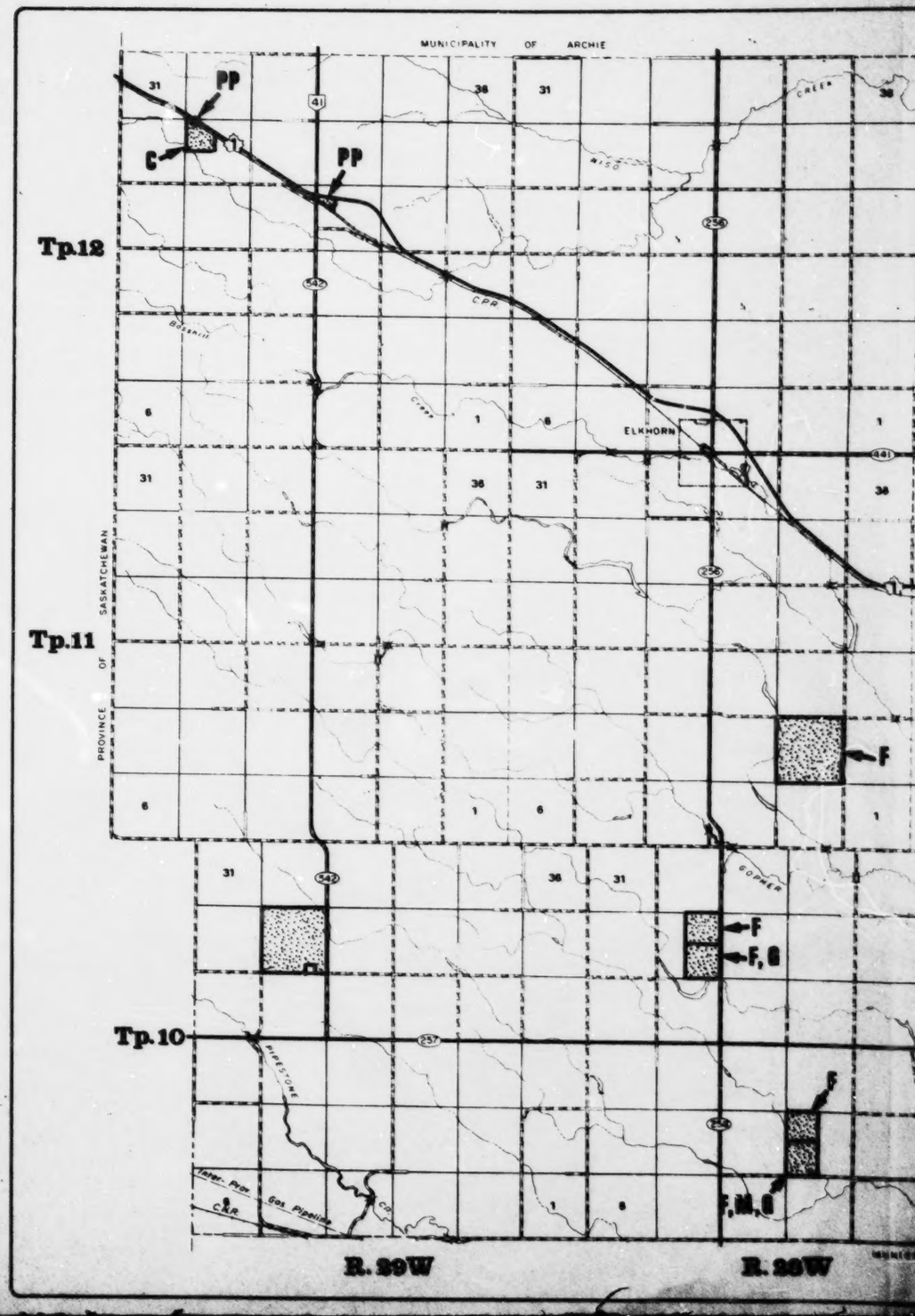


LEGEND

WATER COURSE
- 1st ORDER DRAINS
- 2nd ORDER DRAINS
- 3rd ORDER DRAINS
- 4th ORDER DRAINS
- 5th ORDER DRAINS
- 6th ORDER DRAINS
- 7th ORDER DRAINS

LIMITS OF DRAINAGE AREA
CITY, TOWN AND MUNICIPAL BOUNDARIES
PROVINCIAL TRUNK HIGHWAY (16)
PROVINCIAL ROADS (257)
TRANS CANADA HIGHWAYS (1)
INDIAN RESERVE BOUNDARY

SCALE IN MILES
0 1 2 3 4 5
SCALE IN KILOMETRES
0 1 2 3 4 5 6 7 8



VIRDEN ~ WALLACE
PLANNING DISTRICT

Map 5. Crown Land & Crown Land Commitments (Oct. 31, 1984).

Provincial Crown Land

Orders-in-Council

W Wildlife Management Area

Community Pasture

PP Provincial Wayside Park

Agriculture

F Forage Lease

C Cash Rental Lease

Other

G General Permit

M Miscellaneous Lease

1 0 1 2 3 4 5 Miles

1 0 1 2 3 4 5 6 7 Kilometers

MUNICIPALITY OF ARCHIE

MUNICIPALITY OF MINIOTA

MUNICIPALITY OF PIPESTONE

ELKHORN

VIRDEN

R. 28W

R. 27W

R. 26W